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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,739	02/03/2004	Weiling Peng	HARD1.007C1	1004

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KNOBBE MARTENS OLSON & BEAR LLP  
2040 MAIN STREET  
FOURTEENTH FLOOR  
IRVINE, CA 92614

EXAMINER

THOMPSON, CAMIE S

ART UNIT PAPER NUMBER

1774

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/770,739

Applicant(s)

PENG ET AL.

Examiner

Camie S. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed June 21, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed June 21, 2005 have been acknowledged.
2. Examiner acknowledges newly added claims 17-21.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Guyette, U.S. Patent Number 5,425,986.

Guyette discloses a high-pressure laminate structure that can be suitable for flooring (see column 1, lines 44-62). The Guyette reference discloses a laminate structure comprising a fiber cementboard as a core layer or substrate (11) having a top and bottom surface and at least one resin impregnated sheet (30) on at least one side of the substrate (see Figure 1). Additionally, the reference discloses an adhesive (20), which can be an isocyanate/urethane that is between the substrate and the at least one resin impregnated sheet (see Figure 2 and column 6, lines 15-35). Column 4, lines 49-68 of the reference disclose that the resin used to impregnate the sheets include melamine-formaldehyde resin and phenol-formaldehyde resin as per the instant claims. Also, Figure 1 of the reference discloses that a resin impregnated paper (30 and 31) can be

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laminated to both sides of the substrate. Additionally in Figure 1, another resin impregnated (41) sheet can be laminated onto another resin impregnated sheet (30) as per instant claim 12. The elongation, modulus of elasticity and glass transition temperature of the elastomer are 20-1200%, 10-10,000 psi and -90 and 50°C respectively as they are the physical properties of isocyanate/urethane adhesive and would therefore be inherent. Isocyanate/urethane adhesives have a high elastic modulus and would provide sufficient stress relief to prevent delamination between the cementitious material and the at least one resin impregnated paper after the laminated structure is incubated at a temperature of about 60° C for not less than three days; dessicated in a relative humidity environment of not more than 10% for a period of not less than two days or subjecting the structure to at least five serial wet and dry cycles wherein said dry cycle comprises incubating said laminate structure for about twenty-four hours for about 60°C and said wet cycle comprises soaking said laminate structure in water for twenty-four hours.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guyette, U.S. Patent Number 5,425,986.

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Guyette discloses a high-pressure laminate structure that can be suitable for flooring (see column 1, lines 44-62). The Guyette reference discloses a laminate structure comprising a fiber cementboard as a core layer or substrate (11) having a top and bottom surface and at least one resin impregnated sheet (30) on at least one side of the substrate (see Figure 1). Additionally, the reference discloses an adhesive (20), which can be an isocyanate/urethane that is between the substrate and the at least one resin impregnated sheet (see Figure 2 and column 6, lines 15-35). Column 4, lines 49-68 of the reference disclose that the resin used to impregnate the sheets include melamine-formaldehyde resin and phenol-formaldehyde resin as per the instant claims. Also, Figure 1 of the reference discloses that a resin impregnated paper (30 and 31) can be laminated to both sides of the substrate. Additionally in Figure 1, another resin impregnated (41) sheet can be laminated onto another resin impregnated sheet (30). Guyette does not provide for the thickness of the elastomeric film. However, this is an optimizable feature. The thickness of the elastomeric film (adhesive) affects the flexibility of the film. Discovery of optimum values of a result effective variable involves only routine skill in the art *in re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Response to Arguments***

7. Applicant's arguments filed June 21, 2005 have been fully considered but they are not persuasive. Applicant argues that the Guyette reference. Applicant argues that the epoxy is not a

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stress-relieving elastomer. Guyette does disclose that the adhesive can be an isocyanate/urethane (see column 6, lines 15-35), which is an elastomer. Also, applicant argues that the Guyette reference does not disclose the properties of a stress-relieving and elastomeric film. Applicant argues that epoxy materials do not have elastomeric properties. Isocyanate/urethane adhesives have elastomeric properties. The elongation, modulus of elasticity and glass transition temperature of the elastomer are 20-1200%, 10-10,000 psi and -90 and 50°C respectively as they are the physical properties of isocyanate/urethane adhesive and would therefore be inherent. Applicant argues that claims 14-16 are not product-by-process claims. Isocyanate/urethane adhesives have a high elastic modulus and would provide sufficient stress relief to prevent delamination after being subjected to the test conditions provided in the claims.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The

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examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RENA DYE  
SUPERVISORY PATENT EXAMINER  
A.U. 1774 8/29/05